UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/631,947	07/30/2003	Zhihui Chen	01CON218P-CIP	1770

53375 7590 04/05/2007

FARJAMI & FARJAMI LLP
26522 LA ALAMEDA AVE.
SUITE 360
MISSION VIEJO, CA 92691

EXAMINER	
O CONNOR, BRIAN T	
ART UNIT	PAPER NUMBER
2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/631,947	CHEN ET AL.	
	Examiner	Art Unit	
	Brian T. O'Connor	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/30/2003*; 2/28/2006
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wildfeuer et al. (US 6,829,244; hereafter Wildfeuer) in view of Ahmad (US 6,868,116) and further in view of Schulzrinne et al. ("RTP Payload for DTMF Digits, Telephone Tones and Telephone Signals", RFC 2833, IETF, May 2000; hereafter RFC-2833).

With respect to claims 1 and 7, Wildfeuer discloses a communication technique using a first gateway (106a of Figure 1), a first modem (102a of Figure 1), a telephone line between the first gateway and the first modem (104a, 108 of Figure 1), a second gateway (106b of Figure 1), a second modem (102b of Figure 1), a telephone line between the second gateway and the second modem (104b, 108 of Figure 1) and a packet network for communication between the first gateway and the second gateway (110 of Figure 1). Wildfeuer's technique begins with the first modem receiving a call setup request from the second modem (column 5, lines 30-37), and then the first modem sends an answer back tone to the second modem (column 5, lines 36-40). The call setup request and the answer back tone are received, detected, and processed by the first gateway modules (112a, 114a, 116a, 120a of Figure 1) that convert PCM signals into frames for packet transmission and convert packets of frame data into PCM

signals. The first gateway also uses a TDET module (212 of Figure 2) to detect the answer back tone sent by the first modem (column 5, lines 16-17).

However Wildfeuer fails to disclose a module for detecting a phase reversal in the answer back tone.

Ahmad, in an invention of telephone signal detection, disclose a detection method using a decision detector (67 of Figure 4) that indicates the presence of phase reversals in a modem answer tone (column 5, lines 53-63).

Ahmad realizes the advantage of increased market and operations applicability by using a detector that is compatible with G.165 standards for international telephone circuits (column 2, lines 1-8). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to use the detector and technique of Ahmad with the communications network and method of Wildfeuer.

Wildfeuer also fails to disclose the first gateway sending a message indicates the detection of a phase reversal in the answer tone to the second gateway over the packet network.

RFC-2833 discloses an Internet telephone gateway for transmitting a message packet (RTP payload) instead of an audio packet (PCM encoded data frames) when a DTMF or telephone signal needs to be transmitted (Section 1 Introduction, second paragraph, pg 1). RFC-2833 teaches support for the modem tones ANS, /ANS, ANSam, and /ANSam (Section 3.11 Data Modem and Fax Events, pg 11-12; Table 3, pg 14).

RFC-2833 realizes the advantage of greater accuracy in sending tone signals over packet networks by using messaging instead of low-rate encoders that have difficulty in reproducing accurate tone signals (Introduction section, first paragraph, pg 1). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to use the technique of RFC-2833 with the communication network and method of Wildfeuer.

With respect to claims 13 and 18, Wildfeuer discloses a communication technique using a first gateway (106a of Figure 1), a first modem (102a of Figure 1), a telephone line between the first gateway and the first modem (104a, 108 of Figure 1), a second gateway (106b of Figure 1), a second modem (102b of Figure 1), a telephone line between the second gateway and the second modem (104b, 108 of Figure 1) and a packet network for communication between the first gateway and the second gateway (110 of Figure 1). Wildfeuer's technique includes the first gateway receiving a call signal from the first modem directed to the second modem (column 5, lines 30-37), and then transmitting a call request generated by the call signal from the first modem over the packet network (column 5, lines 36-40). Next, the first gateway will receive and process a answer back tone generated by the second modem and transmitted by the second gateway. The call setup request and the answer back tone are received, detected, and processed by the first gateway modules (112a, 114a, 116a, 120a of Figure 1) that convert PCM signals into frames for packet transmission and convert packets of frame data into PCM signals. Wildfeuer also discloses that an echo

cancellation (208 of Figure 2) is disabled when an answer back tone is detected (column 5, lines 17-21).

However Wildfeuer fails to disclose a message that contains a phase reversal in the answer back tone.

Ahmad, in an invention of telephone signal detection, discloses that phase reversals are contained in a modem answer tone (column 5, lines 53-63).

Ahmad realizes the advantage of increased market and operations applicability by using a detector that is compatible with G.165 standards for international telephone circuits (column 2, lines 1-8). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to use the detector and technique of Ahmad with the communications network and method of Wildfeuer.

Wildfeuer also fails to disclose the first gateway sending a message indicates the detection of a phase reversal in the answer tone to the second gateway over the packet network.

RFC-2833 discloses an Internet telephone gateway for transmitting a message packet (RTP payload) instead of an audio packet (PCM encoded data frames) when a DTMF or telephone signal needs to be transmitted (Section 1 Introduction, second paragraph, pg 1). RFC-2833 teaches support for the modem tones ANS, /ANS, ANSam, and /ANSam (Section 3.11 Data Modem and Fax Events, pg 11-12; Table 3, pg 14).

RFC-2833 realizes the advantage of greater accuracy in sending tone signals over packet networks by using messaging instead of low-rate encoders that have

difficulty in reproducing accurate tone signals (Introduction section, first paragraph, pg 1). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to use the technique of RFC-2833 with the communication network and method of Wildfeuer.

With respect to claims 2, 8, 14, and 19, Wildfeuer does not disclose a packet message that indicates an answer tone with phase reversal.

RFC-2833 discloses an encoding symbol for an answer tone with phase reversal (Section 3.11 Data Modem and Fax Events, pg 11; Table 3, pg 14; see **/ANS**).

RFC-2833 realizes the advantage of greater accuracy in sending tone signals over packet networks by using messaging instead of low-rate encoders that have difficulty in reproducing accurate tone signals (Introduction section, first paragraph, pg 1). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to use the technique of RFC-2833 with the communication network and method of Wildfeuer.

With respect to claims 3, 9, 15, and 20, Wildfeuer does not disclose a packet message that indicates an amplitude-modulated answer tone with phase reversal.

RFC-2833 discloses an encoding symbol for an amplitude-modulated answer tone with phase reversal (Section 3.11 Data Modem and Fax Events, pg 11-12; Table 3, pg 14; see **/ANSam**).

RFC-2833 realizes the advantage of greater accuracy in sending tone signals over packet networks by using messaging instead of low-rate encoders that have difficulty in reproducing accurate tone signals (Introduction section, first paragraph, pg

1). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to use the technique of RFC-2833 with the communication network and method of Wildfeuer.

With respect to claims 4 and 10, Wildfeuer does not disclose sending a packet message that indicates an answer tone before sending a packet message that indicates an answer tone with phase reversal.

RFC-2833 discloses encoding symbols for an answer tone and an answer tone with phase reversal (Section 3.11 Data Modem and Fax Events, pg 11-12; Table 3, pg 14; see **ANS** and **/ANS**). RFC-2833 explains that ANS is for disabling echo suppression and /ANS is for disabling echo suppression and echo cancellation. One of ordinary skill in the art would realize the benefit of higher transmission speeds by disabling echo suppression and echo cancellation if echo suppression does not allow a user specified transmission speed for the modem connection.

RFC-2833 realizes the advantage of greater accuracy in sending tone signals over packet networks by using messaging instead of low-rate encoders that have difficulty in reproducing accurate tone signals (Introduction section, first paragraph, pg 1). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to use the technique of RFC-2833 with the communication network and method of Wildfeuer.

With respect to claims 6 and 12, Wildfeuer further discloses that the second gateway also has an echo canceller (208 of Figure 2) that is disabled when an answer back tone is detected (column 5, lines 17-21).

Wildfeuer does not disclose receiving a packet message that indicates an answer tone with a phase reversal from the first gateway.

RFC-2833 discloses an encoding symbol for an answer tone with phase reversal (Section 3.11 Data Modem and Fax Events, pg 11-12; Table 3, pg 14; see **/ANS**).

RFC-2833 realizes the advantage of greater accuracy in sending tone signals over packet networks by using messaging instead of low-rate encoders that have difficulty in reproducing accurate tone signals (Introduction section, first paragraph, pg 1). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to use the technique of RFC-2833 with the communication network and method of Wildfeuer.

With respect to claims 5, 11, 17, and 22, Wildfeuer does not disclose a packet message that indicates a phase reversal is a phase reversal message.

RFC-2833 discloses an encoding symbol for an answer tone with phase reversal (Section 3.11 Data Modem and Fax Events, pg 11-12; Table 3, pg 14; see **/ANS**).

RFC-2833 realizes the advantage of greater accuracy in sending tone signals over packet networks by using messaging instead of low-rate encoders that have difficulty in reproducing accurate tone signals (Introduction section, first paragraph, pg 1). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to use the technique of RFC-2833 with the communication network and method of Wildfeuer.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. O'Connor whose telephone number is 571-270-1081. The examiner can normally be reached on 9:00AM-6:30PM, M-F, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Brian T. O'Connor
March 30, 2007

HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600